ADMISSIBILITY OF DNA IN CIVIL AND CRIMINAL CASES IN INDIA

Mudassir Nazir

ABSTRACT

DNA is an abbreviation of Deoxyribo nucleic acid. It’s an organic substance which is found in every living cell and gives an individual a personal genetic blueprint. It can be extracted from blood, saliva, semen, hair, bones and other organs of the body. DNA technique now enjoys a legitimacy all over the world. The technique helps the identification of criminals on scientific lines. However the technique require great care and caution. DNA is essentially made up of amino acids and it’s matched with so called bases which provide the key to determining the genetic blueprint. Each and every cell in the human body has a sample of DNA. Presently, there is no concrete law, specific law to govern the admissibility of forensic technique however the courts of law derives the validity of forensic technique from various provisions of CRPC and evidence Act. The paper will examine the role of DNA in criminal investigation, the paper will also analyses the increasing role of DNA identification in the Indian criminal justice system, a comparative analysis and the care and caution which a forensic scientist is supposed to take.

Key-words: DNA, criminal justice system, forensic scientist.

1 LLM student, faculty of law Jamia Millia Islamia, New Delhi
INTRODUCTION

DNA is the abbreviation of Deoxyribo Nucleic Acid. It’s a basic genetic material in all human body cells. Its present in white corpuscles and not in red corpuscles. DNA structure determines human character, behavior and body characteristics. The structure of DNA varies from personality to personality. Each individual has a unique DNA. ALEC IFFREYS, pioneer of DNA profiling. DNA analysis, also called DNA typing or DNA profiling, examines DNA found in physical evidence such as blood, hair, and semen, and determines whether it can be matched to DNA taken from specific individuals. DNA analysis has become a common form of evidence in criminal trials. It is also used in civil litigation, particularly in cases involving the determination of Paternity of Identity.

ADMISSIBILITY OF DNA IN INDIAN LEGAL SYSTEM

DNA test provides perfect identity and is admissible. The admissibility of the DNA evidence before the court always depends on its accurate and proper collection, preservation and documentation which can satisfy the court that the evidence which has been put in front it is reliable. There is no specific legislation which is present in India which can provide specific guidelines to the investigating agencies and the court, and the procedure to be adopted in the cases involving DNA as its evidence. Moreover, there is no specific provision under Indian Evidence Act, 1872 and Code of Criminal Procedure, 1973 to manage science, technology and forensic science issues. Due to lack of having any such provision, an investigating officer has to face much trouble in collecting evidences which involves modern mechanism to prove the accused person guilty. Section 53 of Code of Criminal Procedure 1973 authorizes a police officer to get the assistance of a medical practitioner in good faith for the purpose of the investigation. But, it doesn't enable a complainant to collect blood, semen etc. for bringing the criminal charges against the accused. The amendment of Cr.P.C. by the Cr.P.C. (Amendment) Act, 2005 has brought two new sections which authorize the investigating officer to collect DNA sample from the body of the accused and the victim with the help of medical practitioner. These sections allow examination of person accused of rape by medical practitioner and the medical examination of the rape victim respectively. But the admissibility of these evidences

---

2 Pantangi Balarama Venkata Ganesh vs. state of Andhra Pradesh, 2003 crlj 4508(AP)
has remained in a state of doubt as the opinion of the Supreme Court and various High Courts in various decisions remained conflicting. Judges do not deny the scientific accuracy and conclusiveness of DNA testing, but in some cases they do not admit these evidences on the ground of legal or constitutional prohibition and sometimes the public policy. There is an urgent need to re-examine these sections and laws as there is no rule present in the Indian Evidence Act, 1872 and Code of Criminal Procedure, 1973 to manage science and technology issues. Many developed countries have been forced to change their legislation after the introduction of the DNA testing in the legal system. There are certain provisions which are present in the Indian Evidence Act, 1872 such as Section 112 which determine child's parentage and states that a child born in a valid marriage between a mother and a man within 280 days of the dissolution of the marriage, and the mother remaining unmarried shows that the child belongs to the man, unless proved otherwise but again no specific provision which would cover modern scientific techniques. DNA analysis is of utmost importance in determining the paternity of a child in the cases of civil disputes. Need of this evidence is most significant in the criminal cases, civil cases, and in the maintenance proceeding in the criminal courts under Section 125 of the Cr. P. C.

The introduction of the DNA technology has posed serious challenge to some legal and fundamental rights of an individual such as “Right to privacy”, “Right against Self-incrimination”. And this is the most important reason why courts sometimes are reluctant in accepting the evidence based on DNA technology. Right to Privacy has been included under Right to Life and Personal liberty or Article 21 of the Indian Constitution, and Article 20(3) provides Right against Self-Incrimination which protects an accused person in criminal cases from providing evidences against himself or evidence which can make him guilty. But it has been held by the Supreme Court on several occasions that Right to Life and Personal Liberty is not an absolute Right. In *Govind Singh v. State of Madhya Pradesh*, Supreme Court held that a fundamental right must be subject to restriction on the basis of compelling public interest. It is clear from various decisions which have been delivered by the Supreme Court from time to time that the Right to Life and Personal Liberty which has been guaranteed under our Indian Constitutions not an absolute one and it can be subject to some restriction. And it is on this basis that the constitutionality of the laws affecting Right to Life and Personal Liberty are upheld by the Supreme Court which includes medical examination. And it is on the basis that various courts in the country have allowed DNA technology to be used in the investigation and
in producing evidence. To make sure that modern technologies can be used effectively, there is an urgent need of a specific legislation which would provide the guidelines regulating DNA testing in India.

The refusal of the Supreme Court to dismiss the Delhi High court's decision ordering veteran congress leader N.D. Tiwari to undergo the DNA test is very important from the viewpoint of the admissibility of such evidence. In this case, Rohit Shekhar has claimed to be the biological son of N.D. Tiwari, but N.D. Tiwari is reluctant to undergo such test stating that it would be the violation of his Right to privacy and would cause him public humiliation. But Supreme Court rejected this point stating when the result of the test would not be revealed to anyone and it would under a sealed envelope, there is no point of getting humiliated. Supreme Court further stated that we want young man to get justice; he should not left without any remedy. It would be very interesting to see that how courts in India would allow the admissibility of DNA technology in the future.3

ADMISSIBILITY OF DNA IN CIVIL CASES

The call for DNA test on civil side is generally made to settle the paternity issue involved in cases of divorce, maintenance, inheritance and succession etc. It is noteworthy that Section 112 provides for the legitimacy of a child born during wedlock and the only ground to rebut this presumption is non access of the husband. Thus at one point of time it was an issue before the court dealing with paternity issues whether such test could be ordered. This issue was discussed at length in Gautam Kundu v. Bengal4 where the division bench of apex court, inter alia, held as follows:- —

(1) That courts in India cannot order blood test as matter of course
(2) There must be a strong prima facie case in that the husband must establish non-access in order to dispel the presumption arising under section 112 of the Evidence Act.
(3) No one can be compelled to give sample of blood for analysis.

---


4 (1993) 3 SCC 418

---
However subsequently a full bench of the Supreme Court in *Sharda v. Dharmapat*\(^5\) considered the power of a matrimonial court to order such test and clarified that Goutam Kundu (supra) is not an authority for the proposition that under no circumstances the Court can direct that blood tests be conducted. It, having regard to the future of the child, has, of course, sounded a note of caution as regard mechanical passing of such order. The Court after hefty discussion summed up three significant conclusions-

1. A matrimonial court has the power to order a person to undergo medical test.
2. Passing of such an order by the court would not be in violation of the right to personal liberty under Article 21 of the Indian Constitution.
3. However, the Court should exercise such a power if the applicant has a strong prima facie case and there is sufficient material before the Court. If despite the order of the court, the respondent refuses to submit himself to medical examination, the court will be entitled to draw an adverse inference against him.

In *Bhabani Prasad Jena v. Convener Secretary, Orissa State Commission for Women and Another*,\(^6\) the Supreme Court sketched the approach for courts while directing DNA test. The apex court observed, —In a matter where paternity of a child is in issue before the court, the use of DNA is an extremely delicate and sensitive aspect. One view is that when modern science gives means of ascertaining the paternity of a child, there should not be any hesitation to use those means whenever the occasion requires. The other view is that the court must be reluctant in use of such scientific advances and tools which result in invasion of right to privacy of an individual and may not only be prejudicial to the rights of the parties but may have devastating effect on the child. Sometimes the result of such scientific test may bastardize an innocent child even though his mother and her spouse were living together during the time of conception. In our view, when there is apparent conflict between the right to privacy of a person not to submit himself forcibly to medical examination and duty of the court to reach the truth, the court must exercise its discretion only after balancing the interests of the parties and on due consideration whether for a just decision in the matter, DNA is eminently needed. DNA in a matter relating to paternity of a child should not be directed by the court as a matter of course or in a routine manner, whenever such a request is made. The court has to consider diverse aspects including presumption under Section 112 of the Evidence Act: pros and cons of such

---

5 (2003) 4 SCC 493

6 (2010) 8 SCC 633
order and the test of ‘eminent need’ whether it is not possible for the court to reach the truth without use of such test.

It would be worth to mention the judgment of the Delhi High Court in *Shri Rohit Shekhar v. Shri Narayan Dutt Tiwari and Anr.* In which the court has gone a step further. In peculiar facts of this case, the petitioner, who was born during a subsisting marriage of her mother, asked for DNA test on the respondent, claiming the latter to be his biological father. The Court has ordered DNA test on the respondent a third party to marriage, primarily recognizing, from various international covenants, the right of a child to know of his biological antecedents. However the Court has been cautious to judgments of the Hon’ble Supreme Court in Sharda and Bhabani Prasad Jena and justified on reasons a prima facie case for ordering DNA test.

In the case of *Anita M/O Eknath katkar v. Add. Commissioner kashik & ors* the Supreme Court in this case ordered the DNA and acted on the report and dismiss the petition. The child got relief and court held that the respondent is the mother of petitioner.

**LEGAL POSITION OF FORENSIC TECHNIQUES**

Legal position- In India the legal position of forensic technique has to pass through a three-fold litmus test viz.

1. **What is the constitutional validity of such test?** - The constitutional validity can be challenged on the basis of Article 20 (3) of the Indian Constitution which provides that No person accused of an offence shall be compelled to be a witness against oneself. The answer can be drawn from *State of Bombay V. Kathikalu* where it was held by the Hon’ble Court that giving the specimen and information for forensic examination is just like providing relevant facts within the meaning of Sections 9 & 11 of Evidence Act and it does not fall under the parameter of evidence against one self.

2. **What is the evidential value of the forensic information obtained from the experts?** - A general rule is that opinion of a person having special skill or knowledge in a particular field shall be admissible to the court of law (Article 45 Indian Evidence Act). Thus the expert assists and determines fact in issue and relevant fact to furnish information to judicial officers. Though it is not a conclusive proof but it can be used as corroborative.

---

7 MANU/DE/3701/2010: 2011(121) DRJ 563
9 AIR 1961 SC 1808
evidence. In *Madan Gopal Kakkad vs. Naval Dubey and Another*\(^{10}\) it was held that opinion of expert is admissible. In *Machindra vs. Sajjan Galpha Rankhamba*,\(^1\) has observed that an expert opinion should be demonstrative and supported by convincing reasons.

3. In the absence of any concrete legislation what stand is taken by judiciary regarding admissibility of DNA forensics? - At present in India there is no concrete law to govern issues of admissibility of forensic technique. Some sections i.e. Sections 53, 54, 53(A), 164(A) of Code of Criminal procedure govern science and technology issue to certain extend. Therefore it is completely left on judicial discretion either to permit DNA test or to deny any such request. Such a condition creates confusion and uncertainty over subordinate judiciary.

The researcher has made diligent attempt to cover entire legal, scientific, social impact in utilizing this novel forensic technique. Issues of concern and privacy of right is also dealt with. In *Asit Kapoor v. Union of India*\(^{12}\) it was held that no party to a legal proceeding can be compelled for any scientific test against his/her will as it has effect of infringing upon his right to privacy. Some important guidelines are issued in *Gautama Khandu v. State of West Bengal & Anr*\(^{13}\) which is summed up as follows:

- Matrimonial court has power to order a person to undergo some medical test.
- Such order wouldn’t be considered as violation of Right to personal liberty enshrined under Article 21 of Indian Constitution.
- Such a power is exercise by court when there is strong prima facie case and sufficient material before the court. If the respondent refuses to medical examination despite of the order of the court, then court will be entitled to draw adverse inference against him.

Thus Indian judiciary had adopted forensic evidence but it is legislative machinery which is lagging behind in assimilating scientific development which plays important role not only to solve high profile cases but rape cases and post-conviction matter also

---

\(^{10}\) 1992 AIR SCW 1480


\(^{12}\) AIR 2004 Del 2003

\(^{13}\) AIR 1993 SC 2295
DNA AND SELF-INCRIMINATION

Before exploring the use of DNA tests in criminal cases it would be pertinent to see if it offends the fundamental right of person against self-incrimination. A Constitution Bench of the Hon'ble Supreme Court, in Selvi v. State of Karnataka,\textsuperscript{14} while testing the validity of DNA tests on the anvil of Article 20(3) of the Constitution of India, made following observation, — “The matching of DNA samples is emerging as a vital tool for linking suspects to specific criminal acts. It may also be recalled that as per the majority decision in Kathi Kalu Oghad\textsuperscript{15}, the use of material samples such as fingerprints for the purpose of comparison and identification does not amount to a testimonial act for the purpose of Article 20(3). Hence, the taking and retention of DNA samples which are in the nature of physical evidence does not face constitutional hurdles in the Indian context.”

The Constitution of India by Article 51A (h) and (j) commands that it shall be the fundamental duty of every citizen of India — to develop the scientific temper, humanism and the spirit of enquiry and reform and strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavor and achievements. Though there is no specific DNA legislation enacted in India, sections 53 and 54 of the Code of Criminal Procedure, 1973 (Cr PC) provide for DNA tests implied and they are extensively used in determining complex criminal cases. Section 53 deals with examination of the accused by medical practitioner at the request of police officer there are reasonable grounds to believe that an examination of his person will afford evidence as to the commission of the offence. Section 54 of Cr.P.C. further provides for the examination of the arrested person by the registered medical practitioner at the request of the arrested person. By the Amendment Act of 2005, the Cr.P.C. was amended \textit{inter alia} to add new section 53-A which mandates the examination of a person accused of rape by a medical practitioner. By this amendment, new explanation includes within its ambit examination of blood, blood stains. Semen, sputum, swabs, sweat, hair samples and finger nails by the use of modern techniques in the case of sexual offences including DNA profiling and such other tests which is necessary in a particular case. Though section 53-A refers only to examination of the accused by medical practitioner at the request of the police officer, the court has wider power for the purpose of doing justice

\textsuperscript{14} (2010) 7 SCC 263

\textsuperscript{15} AIR 1961 SC 1808
in criminal cases, by issuing direction to the police officer to collect blood samples from the accused and conduct DNA test for the purpose of further investigation under sections 173(8) and 293(4) (e) of the Cr PC. Apart from these provisions, section 45 of the Indian Evidence Act, 1872 is more important so far as the admissibility of DNA evidence is concerned. Section 45 deals with the opinion of the expert.

**APPLICABILITY OF DNA AS AN EVIDENCE**

Coming to the application in criminal cases, DNA tests can be effectively used in criminal cases for the following purpose. First, it assists in positively identifying the perpetrators of crime, particularly in cases of sexual assault and homicide where identification is often a central issue. Second, to identify the remains of victims of violent crimes. The most suitable application of DNA tests for these purposes is evident in two popular cases namely, *Santosh Kumar Singh v. State*¹⁶ (establishing commission of rape by the appellant) and *Surendra Koli v State of U.P*¹⁷ (to identify dead bodies of victims).

**Statutory Recognition**

It should be noted that the Explanation to Sections 53, 53A and 54 of the Code of Criminal Procedure, 1973 was amended in 2005 to clarify the scope of medical examination of the accused, especially with regard to the extraction of bodily substances, and in particular to use of DNA Profile technique. In *Krishna Kumar Malik v State of Haryana*,¹⁸ the Supreme Court in a rape case observed, —Now, after the incorporation of Section 53 (A) in the Criminal Procedure Code, with effect from 23.06.2006, brought to our notice by learned counsel for the Respondent-State, it has become necessary for the prosecution to go in for DNA test in such type of cases, facilitating the prosecution to prove its case against the accused. Prior to 2006, even without the aforesaid specific provision in the Cr.P.C. prosecution could have still resorted to this procedure of getting the DNA test or analysis and matching of semen of the Appellant with that found on the undergarments of the prosecutrix to make it a fool proof case.

---

¹⁶ (2010) 7 SCC 263
¹⁷ (2011) 4 SCC 80
¹⁸ (2011) 7 SCC 130
SC DECISION IN THE NANDLAL WASUDEO BADWAIK, A CASE COMMENT.

The case, *Nandlal Wasudeo Badwaik v. Lata Nandlal Badwaik & Anr* 19 was a special leave petition directed against the order of High court for not allowing DNA test to prove the paternity of child. The appellant Nandlal Wasudeo Badwaik married a Latha on 30th June, 1990 at Chandrapur. According to him, both the husband and wife separated from 1991. They had no physical contact between them after 1991. An application for maintenance under Section 125 of the Code of Criminal Procedure filed by his wife, but the same was dismissed by the learned Magistrate by order dated 10th December, 1993. Thereafter, the wife resorted to a fresh proceeding under Section 125 of the Code of Criminal Procedure, 1973 claiming maintenance for herself and her daughter. She alleged that she started living with her husband from 20th of June, 1996 and stayed with him for about two years and during that period got pregnant. The appellant resisted the claim of his wife and stated that the assertion of his wife that she stayed with his husband since 20th June, 1996 is false. He denied the claim that he is the father of respondent No.2, the girl child. The claim of the wife accepted. The Magistrate granted maintenance to both the wife and daughter. The appellant preferred a revision petition before the High Court to order for DNA test to prove the paternity of child and claimed that no maintenance ought to have been awarded to the child. The High Court denied his claim and dismissed his revision petition. The appellant preferred a Special Leave Petition before the Supreme Court against the order of High Court. The Supreme Court dismissed the order of High court and favored the appellant to order for DNA test on a condition that the appellant petitioner to deposit all dues, both arrear and current, in respect of the maintenance awarded to the wife and child to enable us to consider the prayer for holding of such DNA test on 8th November 2010. The deposit was paid by the appellant on 3rd January, 2011. The Supreme Court allowed the petitioner’s prayer for conducting DNA test for ascertaining the paternity of the child.

The Supreme Court has ordered the appellant and respondent to make a joint application to the Forensic Science Laboratory, Nagpur, for conducting DNA test. The appellant, the respondent No. 1 shall present themselves at the Laboratory with respondent No. 2. The laboratory is directed to send the result of such test to the Court within four weeks thereafter. The Forensic Science Laboratory has submitted the result of DNA testing and opined that appellant is excluded to be the biological father of respondent no. 2. By the said order, the respondent has

---

19 (2014) 2 SCC 576
not been satisfied so she requested for re-test. The Court directs that a further DNA test be conducted at the Central Forensic Laboratory, Hyderabad. The parties are directed to appear before the Laboratory. The Central Forensic Laboratory submitted its report and opined that the appellant can be excluded from being the biological father of respondent no.2. The respondents counsel submits that the appellant having failed to establish that he had no access to his wife at any time when she could have begotten respondent no. 2, the direction for DNA test ought not to have been given. In view of the aforesaid he submits that the result of such a test is fit to be ignored. To justify his claim the respondent’s counsel relied on the judgment of Supreme Court in *Goutham Kundu v. State of West Bengal, Banarsi dass v. Teeku Dutta, Bhabani Prasad Jena v. Orissa State Commission for Women*. In all most all the cases the court ruled that blood test as well as DNA test cannot be ordered as a routine. The result of a genuine DNA test is said to be scientifically accurate. But, that is not enough to escape from the conclusiveness of Section 112 of the Evidence Act e.g. if a husband and wife were living together during the time of conception but the DNA test revealed that the child was not born to the husband, the conclusiveness in law would remain irrefutable. The appellant’s counsel raised the contention that the DNA test had already been ordered and the respondent had also not denied. It is only after the reports of the DNA test had been received, which was adverse to the respondents, that they are challenging it on the ground that such a test ought not to have been directed. We cannot go into the validity of the orders passed by a Court at this stage. It has attained finality. Before, the Supreme Court proceeds to consider the rival submissions analyzing the DNA test that we deem it necessary to understand what exactly DNA test is and ultimately its accuracy. All living beings are composed of cells which are the smallest and basic unit of life. An average human body has trillion of cells of different sizes.

DNA (Deoxyribonucleic Acid), which is found in the chromosomes of the cells of living beings, is the blueprint of an individual. Human cells contain 46 chromosomes and those 46 chromosomes contain a total of six billion base pair in 46 duplex threads of DNA. DNA consists of four nitrogenous bases – adenine, thymine, cytosine, guanine and phosphoric acid arranged in a regular structure. When two unrelated people possessing the same DNA pattern have been compared, the chances of complete similarity are 1 in 30 billion to 300 billion. Given that the Earth’s population is The Supreme Court ruled and evolved a beautiful concept that, “*We may remember that Section 112 of the Evidence Act was enacted at a time when the modern scientific advancement and DNA test were not even in contemplation of the legislature.*
The result of DNA test is said to be scientifically accurate. Although Section 112 rises a presumption of conclusive proof on satisfaction of the conditions enumerated therein but the same is rebuttable. The presumption may afford legitimate means of arriving at an affirmative legal conclusion. While the truth or fact is known, in our opinion, there is no need or room for any presumption. Where there is evidence to the contrary, the presumption is rebuttable and must yield to proof. Interest of justice is best served by ascertaining the truth and the court should be furnished with the best available science and may not be left to bank upon presumptions, unless science has no answer to the facts in issue. In our opinion, when there is a conflict between a conclusive proof envisaged under law and a proof based on scientific advancement accepted by the world community to be correct, the latter must prevail over the former.”

“We must understand the distinction between a legal fiction and the presumption of a fact. Legal fiction assumes existence of a fact which may not really exist. However presumption of a fact depends on satisfaction of certain circumstances. Those circumstances logically would lead to the fact sought to be presumed. Section 112 of the Evidence Act does not create a legal fiction but provides for presumption. The husband’s plea that he had no access to the wife when the child was begotten stands proved by the DNA test report and in the face of it, we cannot compel the appellant to bear the fatherhood of a child, when the scientific reports prove to the contrary. We are conscious that an innocent child may not be bastardized as the marriage between her mother and father was subsisting at the time of her birth, but in view of the DNA test reports and what we have observed above, we cannot forestall the consequence. It is denying the truth. “Truth must triumph” is the hallmark of justice.”

In the above decision, the Supreme Court has changed the presumption under section 112 of the Indian Evidence Act, 1872 which has been followed still now from its enactment. Section 112 of the Indian Evidence Act, 1872 states that the husband has to prove that he has no access with his wife during the time when the child have been begotten. It can be proved either impotency or far away from his wife. The latter is very difficult because —Access and non-access mean the existence or non-existence of opportunities for sexual intercourse; it does not mean actual cohabitation. This above ruling helps the innocent husband to prove his non-access by way of DNA test. For the first time, the Court favors the innocent husband to prove his paternity claim. Here, the court gives priority to DNA test under Section 45 of the Indian Evidence Act, 1872 over the legitimate presumption under Section 112 of Indian Evidence Act,
1872. It is really a welcoming step and by that way our Supreme Court has enforced the fundamental duties enunciated under Article 51A (h) and (j) of Part IV A of the Indian Constitution.

ADMISSIBILITY OF DNA EVIDENCE IN CRIMINAL CASES IN USA AND IN ENGLAND.

AMERICA

In USA, all scientific evidence in criminal trials including evidence derived from DNA identification analysis, must satisfy the test of admissibility in effect in a particular jurisdiction. In general, courts use of two tests. The so-called Frye test, which was pronounced by the U.S. Circuit Court for the District of Columbia in *Frye v. United States*, (293 F. 1013, 1014 (D.C. Cir. 1923)) or one of its variations, is used in a majority of jurisdictions. Under the Frye test, a novel scientific technique must have gained general acceptance the relevant scientific community before it is admitted by the court. The second rule follows the basic relevancy standard of the federal rule of evidence and is used in a majority of state jurisdictions. For admissibility under the federal rules, scientific evidence must have some relevance to the issues in the case, and its probative value must outweigh the potential for prejudice. In *Daubert v. Merrell Dow Pharmaceuticals*, the U.S Supreme Court ruled that the federal rules of evidence have replaced the Frye test in federal court trials. Additionally, the court defined a new federal standard under the rules, the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable. Determining reliability entails a preliminary assessment of —whether the reasoning or methodology underlying the (expert) testimony is scientifically valid and whether the reasoning or methodology can be applied properly to the facts in issue. The court provided a nonexclusive list of factors that may be used to determine scientific validity: (1) whether a theory or technique can be (and has been) tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the known or potential rate of errors in using a particular scientific technique and the existence and maintenance of standards controlling the technique operation; and (4) whether the theory or technique has been generally accepted in the particular scientific field. While the Daubert test

applies to federal courts, most state courts continue to follow the *Frye* test. In general, state and federal courts have increasingly accepted DNA evidence as admissible. In general, courts that have used the *Daubert* standard have been more likely to admit DNA evidence, although many jurisdictions that have relied on *Frye* have also permitted it. Nearly all cases, in which DNA evidence was ruled inadmissible, have been in jurisdictions that have used *Frye*. In *People v. Castro* the New York Supreme Court in a 12 week pretrial hearing exhaustively examined numerous issues relating to the admissibility of DNA evidence. Castro was accused of murdering his neighbor and her 2-year old daughter. A blood stain on Castro’s watch was analyzed for a match to the victim. The court held: DNA identification theory and practice are generally accepted among the scientific community. DNA forensic identification techniques are generally accepted by the scientific community. Pretrial hearings are required to determine whether the testing laboratory’s methodology was substantially in accord with scientific standards and produced reliable results for jury consideration. The *Castro* ruling supports the proposition that DNA identification evidence of exclusion is more presumptively admissible than DNA identification evidence of inclusion. In *Castro*, the court ruled that DNA test could be used to show that blood on Castro’s watch was not, but could not be used to show that the blood was that of his victims.

**ENGLAND**

England is widely recognized as having the most effective and efficient approach to the use of DNA technology in the world. DNA technology and DNA data basing have been central to the process of criminal investigation since the establishment of the National DNA Database in 1995, England has become a world leader in discovering innovative ways to use DNA to identify suspects, protect the innocent to convict the guilty.

**Suggestions by Malimath Committee:**

- More well-equipped laboratories should be established to handle DNA samples and evidence.
- A specific law should be enacted giving guidelines to the police setting uniform standards for obtaining genetic information and creating adequate safeguards to prevent misuse of the same.
• A national DNA database should be created which will be immensely helpful in the fight against terrorism.

Sec. 313 of the CR.P.C must also be amended so as to draw adverse inference against the accused if he fails to answer any relevant material against him therefore, making it easy for the law enforcers to use DNA tests against him.

CONCLUSION

Thus, DNA test as evidence of identity has come to be recognized in our judicial system. James D Watson one of the discoverers of DNA who was awarded the 1962 Nobel Prize for medicine for the same, has made the following observations about handling of DNA evidence, Keeping track of molecular evidence, as opposed to knives and guns, can be an especially demanding chore; scrapings from a side walk may be visually indistinguishable from scrapings from a gatepost, and subsequently extracted DNA sample will doubtless look even more alike when placed in a small plastic test tubes.

Thus although DNA is an exact science its use in evidence has its concerns, which aggravate in Indian scenario where collection of evidence is shrouded with lack of promptness and conduct of medical test always remains under a question mark. The law, it is said, walks a respectable distance behind Science, but courts try to keep abreast. It is my submission that the court while taking help of such evidence need to be careful so that justice is secured to both the parties. The Supreme Court has come up with observations on the civil side directing courts to be extremely careful while ordering DNA test. However there is void of such guidelines or observation on the criminal side where the degree of guilt and punishment both is high and this is one area which requires our attention.

The researchers found some lacunae in conducting these test on accused. The author has opined that if our system over comes these drawback then this test can become good weapon in the arsenal of investigating agencies to bring justice be done. Some of the suggestions are follows:-
- Legislators should take necessary step to legislate a uniform and national level law on conducting DNA tests and its admissibility in court rooms. Because in absence of statutory recognition a situation of confusion and uncertainty prevails over investigating agencies and subordinate judiciary.

- To amend existing laws so as to incorporate provisions regarding permitting blood test for generating DNA profiling.

- To regulate procedure in Forensic laboratories to increase reliability on its report. Labs should adhere to high quality standard; regularly participate in proficiency test, use of splitting method and uniform standard for DNA testing be adopted.

- A national commission be created to regulate and monitor DNA profiling laboratories. Process and acceptability to post conviction DNA testing be incorporate in Indian laws. DNA samples should not be collected as a matter of routine and they should be recommended when information is relevant to a specific crime in question. DNA samples should be collected from suspect only after prior approval of a Judge/Magistrate.

- Proper training is provided to investigating agencies to overcome contamination issue. Proper chain of custody should be maintained. Proper training and sensitization of legal fraternity is required so as to overcome issues like prosecutor’s fallacy.
BIBLIOGRAPHY

BOOKS

- Balakrishnan KG, Raveendran RV, Panchal JM (2010) Supreme Court of India,
- Selvi and ors v. State of Karnataka and anrs.
- Sharma Abhijeet, Guide to DNA [Tests in Paternity Determination and Criminal Investigation, 2007]
- David Lazer, DNA and the Criminal Justice System the Technology of Justice, page 23, 2004

RESEARCH PAPERS

- Forensic Science in Criminal Investigationl, Dr. Jai Shanker Singh, Unique Law Publications.
• History and development of forensic science in India by RK Tewari, KV Ravikumar
  Bureau of Police Research & Development, Ministry of Home Affairs Government of
  India, New Delhi, India.
• Victims and Criminal Justice System in India: Need for a Paradigm Shift in the Justice
  System! Available at www.doiserbia.nb.rs
• Adarsh M. Dhabarde, Forensic Evidences in Criminal Trial: Need of the Hour,
• Arindam Datta, —Forensic Evidence: The Legal Scenariol, Dept. of Law, University
• Dr. Nirpat Patel The Role in Criminal investigation- Admissibility in Indian Legal
  System and future perspective, International Journal of Humanities and Social